Urine Collection And Transport

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The most common urine specimen received is the per-urethral voided urine. Healthy urethra is unsterile and it is extremely critical that urine specimens be collected carefully to minimise urethral contamination. There are several types of urine specimens and the results of each type are determined by different guidelines. Therefore, it is essential that each urine specimen received by the laboratory is clearly labelled as to the type of collection of urine specimen.

1. Collection of urine:

Midstream clean catch urine:

- ✓ The midstream clean catch urine is the most common type of urine specimen.
- ✓ The technique involved in collection is based on voiding the first portion of urine, which is most likely to be contaminated by urethral commensals.
- ✓ It is recommended that the first voided morning specimen be collected, as bacteria would have multiplied to high levels after overnight incubation in the bladder.
- ✓ If not possible, the urine can be collected during the day, preferably 4 hours after the last void, keeping in mind that the counts may be lower, yet significant.
- ✓ Midstream clean catch urine should be collected in a sterile, wide mouth, screw capped bottle after very thorough preliminary cleaning of external genitalia with soap and water. Antiseptics should not be used for

this purpose.

Indwelling catheter:

- ✓ Hospitalized patients with indwelling catheter are especially at risk of developing UTI.
- ✓ To avoid contamination, the specimen is collected by disinfecting a portion of the catheter tubing with alcohol & puncturing the tubing directly with a sterile syringe with needle and aspirating the urine.
- ✓ The urine MUST NOT be collected from the drainage bag.

Suprapubic collection:

- ✓ The suprapubic collection is IDEAL and it avoids urethral contamination but is invasive.
- ✓ This procedure is usually reserved for infants and adults, from whom it is difficult to obtain a midstream clean catch urine specimen.
- ✓ Disinfect the skin above the bladder and plunge a sterile needle with syringe into the bladder; aspirate the urine and transfer to a sterile container.

Percutaneous nephrostomy (PCN) aspirate:

- ✓ Percutaneous nephrostomy aspirate is urine collected directly from renal pelvis.
- ✓ If the sample is a PCN catheter sample, collection must be done as explained for indwelling catheters and not from the drainage bag.

Cystoscopy specimens:

- ✓ Cystoscopy specimen is urine collected from the bladder during cystoscopy.

Ileal conduit specimen:

- ✓ Ileal conduit specimen is collected after cleaning stoma

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- ✓ A fresh drain of urine is collected. It must not be collected from the urine drainage bag.

Intermittent catheter specimen:

A red rubber catheter is introduced into the urethra periodically to drain urine from the bladder. It is collected directly into a specimen container.

2. Specimen Transport:

- ✓ Urine must be transported to the lab as soon as possible.
- ✓ It should be cultured as early as possible after collection, preferably within 2 hours.
- ✓ In case of delay, it may be refrigerated up to a maximum

of 24 hours before plating.

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